

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					R-1 ITEM NOMENCLATURE 0604727N Joint Standoff Weapon System (JSOW)			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	30.282	16.283	0.775	0.526	0.388	0.339	0.346	0.351
A2068 Joint Standoff Weapon (JSOW)	30.282	16.283	0.775	0.526	0.388	0.339	0.346	0.351
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program. The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 was deferred, however the Navy will conduct IOT&E in FY 2003 to verify operational effectiveness and suitability. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomus Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. The Unitary Systems Development and Demonstration (SD&D) program develops the terminal seeker and ATA capbility, and integrates these with a 500 lb class "Unitary" warhead, the British Royal Augmentation Charge (BROACH) Multiple Warhead System (MWS). The BROACH MWS provides blast/fragmentation effects as well as enhanced penetration capability against hard point targets. BROACH MWS development and integration risk is reduced significantly by the on going BROACH developmental efforts of the United Kingdom Storm Shadow Program, the JSOW Foreign Warhead Comparative Testing previously conducted, and the early provisioning for BROACH in the JSOW Unitary Roadmap. Unitary variant Operational Evaluation (OPEVAL) and Low Rate Initial Production is planned for FY 2003, with Full Rate Production beginning in FY 2004. JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces and weight and dimension considerations, JSOW will be compatible with Air Force and NATO aircraft.								
(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it encompasses development and demonstration of new end-items prior to production approval decision.								

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 9)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon System (JSOW)				PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon System (JSOW)			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	30.282	16.283	0.775	0.526	0.388	0.339	0.346	0.351
RDT&E Articles Qty	19							

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements. The JSOW-BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. The JSOW/BLU-108 variant was deferred in the POM-04 budget. However, JSOW-B FY 03 DT/OT funding will still be required to verify the AUR ECP fix during operational test using JSOW-A weapons. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomus Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. The Unitary Systems Development and Demonstration (SD&D) phase of the program concludes with the completion of Operational Evaluation (OPEVAL). A Low Rate Initial Production Contract Award is planned for FY-03. Through adherence to international standards for weapons interfaces and weight and dimension considerations, JSOW will be compatible with Air Force and NATO aircraft. JSOW is a joint Navy/Air Force program.

The Unitary SD&D program phase incorporates a 500 lb class "Unitary" warhead that includes the integration of the Broach Multiple Warhead System (MWS) into the JSOW AGM-154C variant. This is an FY 01 Congressionally approved New Start effort. The Broach MWS provides blast/fragmentation effects as well as enhanced penetration capability against hard point targets. The Broach MWS development and integration risk is reduced significantly by the on going Broach developmental efforts of the United Kingdom Storm Shadow Program, the JSOW Foreign Warhead Comparative Testing previously conducted, and the early provisioning for Broach in the JSOW Unitary Roadmap.

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon System (JSOW)	PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)																	
(U) B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">30.282</td><td style="text-align: center;">15.083</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td style="text-align: center;">19</td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	30.282	15.083	0.000	0.000	RDT&E Articles Quantity	19			
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	30.282	15.083	0.000	0.000															
RDT&E Articles Quantity	19																		
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Unitary SD&D efforts, configuration audits and environmental testing and perform Broach insertion Perform Unitary Broach warhead and fuzing development Perform Unitary combined Development Testing and Operational Testing (DT/OT) on Seeker and Broach warhead Perform Unitary system engineering technical support; complete insensitive munitions qualifications and safety approvals</div>																			
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Accomplishments/Effort/Subtotal Cost	0.000	0.200	0.775	0.526															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Baseline JMPS Migration; plan new functions into JSOW Common Unique Planning Component (CUPC) and develop new software releases of CUPC.</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">1.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		1.000	0.000	0.000	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		1.000	0.000	0.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Conduct AGM-154B Initial Operational Test and Evaluation (IOT&E).</div>																			

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 9)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)	PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)		

(U) C. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
Previous President's Budget	26.615	16.652	0.796	0.596
Current BES/President's Budget	30.282	16.283	0.775	0.526
Total Adjustments	3.667	-0.369	-0.021	-0.070
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.099		
Congressional rescissions	-0.057			
SBIR/STTR Transfer				
Economic Assumptions	-0.083	-0.270	-0.018	-0.011
Reprogrammings	3.807			
Other Navy/OSD Adjustments			-0.003	-0.059
Congressional increases				
Subtotal	3.667	-0.369	-0.021	-0.070

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)			PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
USN WP, N; BLI: 223000 JSOW										
\$S	0.000	101.262	138.451	137.147	144.015	126.226	128.217	130.174	179.201	1084.693
Qtys	0	165	429	463	490	404	387	405	8011	
USAF WP,F; BLI: 27324f* JSOW										
\$S	10.206	12.208	79.017	83.440	84.293	88.302	70.411	71.740	156.311	655.928
Qtys	0	18	335	363	375	380	299	301	735	

(U) E. ACQUISITION STRATEGY:

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts were used for the SD&D program effort. Fixed price type contracts will be used for production.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604727N Joint Standoff Weapon System (JSOW)			A2068 Joint Standoff Weapon (JSOW)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPIF	Raytheon Tucson, AZ	272.295								272.295	272.295
Primary Hardware Development	SS/CPIF	Raytheon Tucson, AZ	242.000	7.183	11/02						249.183	249.183
Ancillary Hardware Development	SS/CPIF	Textron	2.923								2.923	2.923
Ancillary Hardware Development	SS/FPFF	BAE Chorley, England	10.000	2.900	11/02						12.900	12.900
Aircraft Integration	SS/CPIF	Mtech/McDonnell Douglas	21.455								21.455	21.455
Aircraft Integration	WX	NAWCWD China Lake, CA	15.058								15.058	
System Engineering	WX	NAWCWD China Lake, CA	105.527	0.600	11/02						106.127	
Award Fees	FEE	Textron / Raytheon	7.198								7.198	7.198
Subtotal Product Development			676.456	10.683							687.139	
Remarks:												
Software Development	SS/FPFF	Raytheon Tucson, AZ	2.191	0.200	03/03	0.775	10/03	0.526	10/04	1.424	5.116	5.116
Subtotal Support			2.191	0.200		0.775		0.526		1.424	5.116	5.116
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604727N Joint Standoff Weapon System (JSOW)			A2068 Joint Standoff Weapon (JSOW)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCWD China Lake, CA	23.920	2.200	11/02						26.120	
Operational Test & Evaluation	WX	OPTEVFOR Norfolk, VA	5.097	3.000	01/03						8.097	
Subtotal T&E			29.017	5.200							34.217	
Remarks:												
Contractor Engineering Support	Various	Various	17.350	0.100	11/02						17.450	
Travel	Various	Various	6.992	0.100	10/02						7.092	
Subtotal Management			24.342	0.200							24.542	
Remarks:												
Total Cost			732.006	16.283		0.775		0.526		1.424	751.014	
Remarks:												

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EXHIBIT R4, Schedule Profile																									DATE:									
APPROPRIATION/BUDGET ACTIVITY									PROGRAM ELEMENT NUMBER AND NAME																PROJECT NUMBER AND NAME									
RDT&E, N / BA-5									0604727N Joint Standoff Weapon System																A2068 Joint Standoff Weapon (JSOW)									
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
JSOW Unitary																																		
Acquisition Milestones																																		
Missile Integration																																		
Missile Level Qualification																																		
Test & Evaluation Milestones																																		
Development Test																																		
Operational Test																																		
Production Milestones																																		
LRIP FY 03																																		
FRP-1 FY 04																																		
FRP-II FY 05																																		
JSOW-B																																		

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Exhibit R-4a, Schedule Detail

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